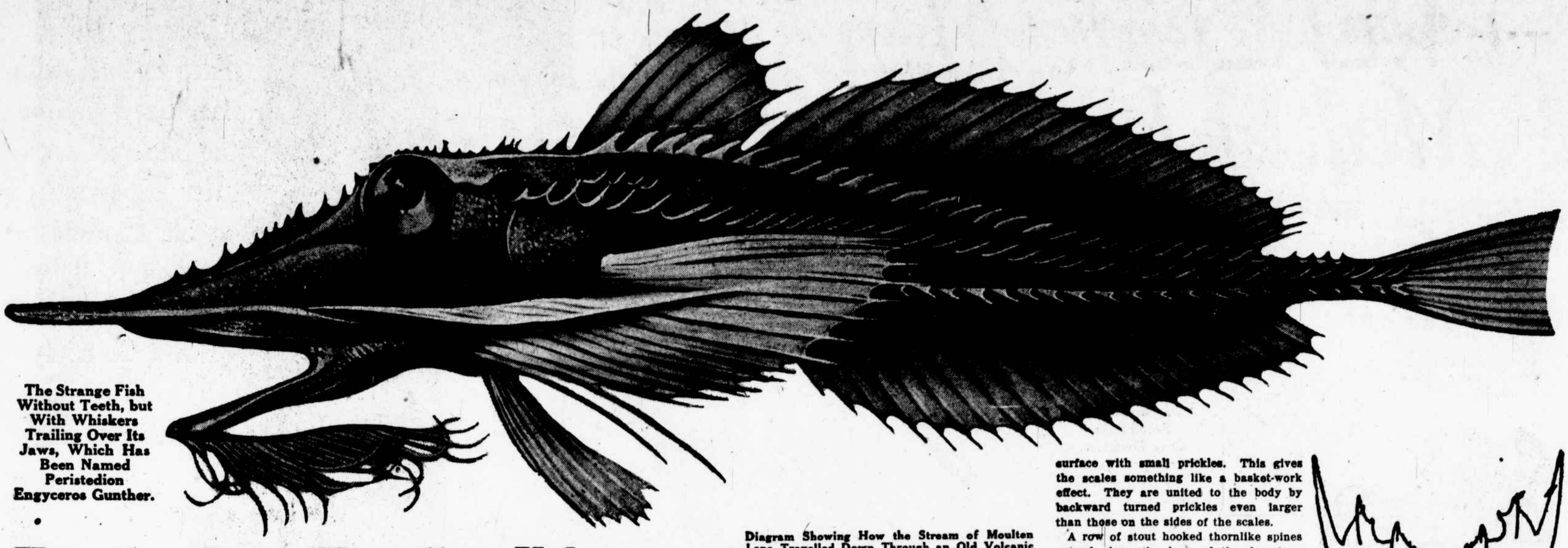
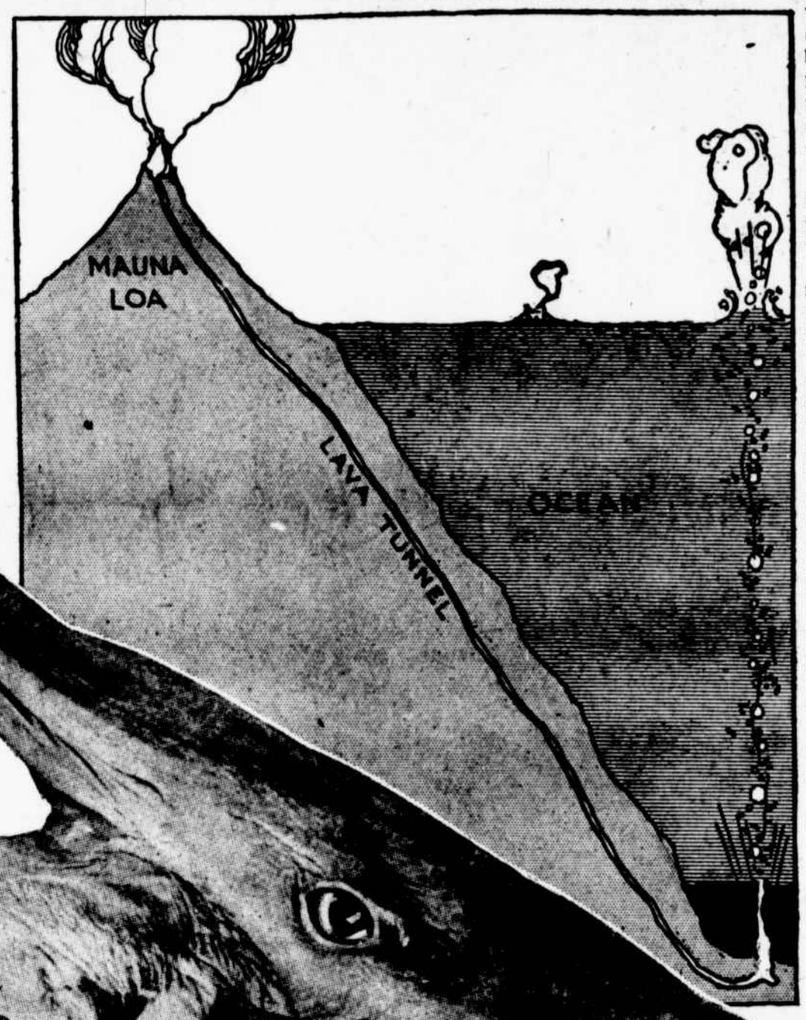
Monsters from Ocean Depths Unknown to Science



The Strange Fish Without Teeth, but With Whiskers Trailing Over Its Jaws, Which Has Been Named Peristedion Engyceros Gunther.

How the Great Hawaiian Volcano, Mauna Loa, Surprised Scientists by Presenting Them with Strange Creatures Which Had Eluded Their Drag-Nets

Diagram Showing How the Stream of Moulten Lava Travelled Down Through an Old Volcanic Tunnel to the Sea Bottom and Broke Forth on the Floor of the Ocean, Killing and Cooking Marine Monsters in the Lava Caves.



THE mysteries of the dark ocean depths have excited the interest of science for many years and patient dredging and dragging of the ocean floor has been going on more or less all over the seas. But it is a difficult and uncertain work and more creatures escape than are caught in the drag-nets.

By an unexpected miracle of nature the scientists of Leland Stanford Jr. University, California, have been presented with half a dozen monsters from the absymal depths which were entirely unknown to them.

Around the Hawaiian Islands, in the Pacific Ocean, the scientists have dragged and dredged, but with little success. The rivers of lava which have now and then for centuries run down the sides of the volcanoes have spread far out over the ocean bottom in rugged, rocky ridges which made it almost impossible to drag the fish-traps along.

As if it had watched with sympathetic interest these futile efforts of the patient scientists the great volcanic mountain, Mauna Loa, recently took a hand in the game and delivered to the ichthyologists several curious deep-sea creatures which had escaped them in the lava canons.

A stream of volcanic lava that had tunneled below the sea bed during an eruption of Mauna Loa exploded beneath their rocky habitations, blasting their homes into fragments and hurling them in boiling geysers to the surface.

This lava was heated to the enormous temperature of 1,800 degrees Fahrenheit—hot enough to turn many metals into gas if plunged into the fiery mass. It flowed up through the rocky caverns that housed these strange animals and ejected them in steaming gushers, bubbling above the ocean level.

Animal matter, caught in such seething ocean cauldrons, was thoroughly cooked before it reached the top, thereby becoming preserved practically as in the original state except for the color of the flesh, which was changed by the intense heat.

Fish by the thousands and various sorts of sea life killed in successive explosions floated on the water and washed up on the shore. Strange and curious forms among them puzzled the native fishermen and local amateur scientists, who had never seen anything like them.

Accordingly carcasses were saved for expert examination and sent to Professor David Starr Jordon, of Leland Stanford Jr. University. He submitted the fish to a thorough investigation and discovered six new species unknown to ichthyologists.

If it had not been for this boiling process, no doubt Professor Jordan, who submitted the first knowledge of the new specimens to the world, would have been unable to give so illuminating a description of these troglodytes of the sea.

It appears that these grotesque fauna were the remnants of ancient breeds of fish existing on earth hundreds of thousands of years before the advent of man. Following the same instincts as man's forebears in the Pliocene Age they became dwellers in ocean caves. The reason was obvious. Without adequate means of defence against sharks and terrible "trap-mouthed" monsters that roamed the 3,000-foot sea level in which they lived, their safety depended upon their ability to find a place to hide. They were not ferocious and possessed no great speed as swimmers, with the result that the open sea became too treacherous for them to live in.

The Repulsive Features of the Goblin Shark.

Astonishing Prognathous-Jawed, Deep Sea Freak Known to Science as Liocetus Murrayi.

Cracks caused by water splitting apart superheated lava rock provided just the right place and whatever few survived the raids of the more ferocious sea monsters have been living in these cracks ever since.

Here they preserved their strain, lurking in the cold, black depths, seldom venturing forth from their well protected fastnesses for fear of becoming the prey of larger monsters.

Among the new discoveries is a pear-shaped creature with a flat body like the common flounder, but a much larger fish. Its scales are unique, each developed as a long, thin vertical strip the color and texture of the material of a wasp's nest.

These scales are several times as thick as they are long and are hooked to each other by three or four ridges running along the side and containing a roughened surface with small prickles. This gives the scales something like a basket-work effect. They are united to the body by backward turned prickles even larger than those on the sides of the scales.

A row of stout hooked thornlike spines extend along the base of the dorsal or back fin, and also along the stomach fin. The fish's color is gray. Its eyes are very large, seemingly for the purpose of seeing well in dark waters. The peculiar basket-like woven scales indicate their possibility of withstanding heavy water pressure, as the manner in which the scales wind around the body is similar to the wire-bound heavy naval gun.

Professor Jordan named the fish "Vesposus," meaning waspy, from the structure of its dry scales, suggesting the material of a wasp's nest.

Still another new species excited the interest of ichthyologists. Two horns projected out from its snout and the lower lip sported a beautiful large barbel or "beard." Another singular characteristic are two horns thrust backward along the jaw, not of the same bony structure as the front horns, but quite strong and tipped at the ends with spines. Its mouth is toothless. Since this is so it must swallow its food whole or suck nourishment from the crustaceans on which it feeds. The horns, therefore, furnish its only means of defence. It has been named Peristedion Engyceros Gunther.

Quite the most beautiful specimen that Professor Jordan examined was the Loa, named for the mountain whose eruption brought it to light. It closely resembles the butterfly fish, well-known to Hawaiians as the Kihikihi. Its color was perhaps yellow in life, with broad, dark edged crossbands running in a general parallel direction with white and yellow bands. Its snout is dusky. On the back fin a single jet-black round spot made a striking foil to the other colors.

Another new specimen was an eel-like fish with snake-shaped head and sharp hooked spines like bramble-thorns, three on each side running along the head. Other fish were found, each showing some peculiarities to distinguish them from species already known.

But the particular feature that all of them possessed were the extremely large eye, sometimes bulging, which appeared to indicate that it was developed through ages of time to peer through the extra dark waters of the rock caves in which they lived.

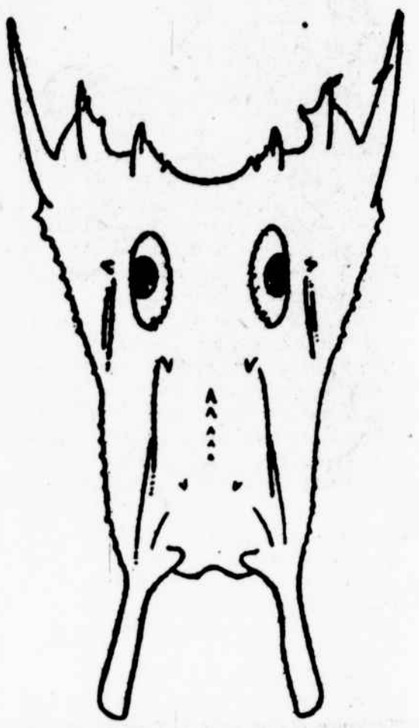
Very likely none of these monsters would ever have become known to science except for the recent terrific activity of Mauna Loa, in which a greater amount of lava was cast into the sea than at any other time since the famous lava flows of 1868-1887, which covered the mountainside and spread around for many miles a thick coating of volcanic rock.

Professor Thomas F. Jaggar, formerly of the Massachusetts Institute of Technology, who is now living in Hawaii for the purpose of learning all he can about the nature and activities of volcanoes, has written a vivid description of this flow.

Shortly before the terrific explosion that flung these fish from the ocean bottom, Mauna Loa had been groaning for several days. Deep down in the earth titanic fires struggled to find a chimneyway for the molten lava that seethed and boiled within the mountain sides.

The few struggling fishermen who lived in huts along the shore and wrung a precarious living from the sea, cast fearful glances constantly at the steam-capped mountain top. Experience had taught them many bitter lessons and they prepared to take to the open sea if the expected lava flow came in the direction of their huts.

Warned by the grumbling beneath their feet that sounded much like the labor of many locomotives, they did not have long to wait. With unaccustomed fury a violent eruption broke through the mountain top and immense masses of lava overflowed the sides, spread over the land and toppled down into the sea.



Front View of the Skull-Horned, Whisker-Jawed Peristedion Engyceros, Which Looks Like a Masked Ku Klux.

Scientists, at the risk of their lives, among them Professor Jaggar, hurried from Kilauea, a nearby volcano, where they have their headquarters and where scientific instruments are kept, and discovered that the mountainside had actually split open and from forty fiery fountains lava streamed upward to a height of three hundred or four hundred feet.

The fury of the fire giant became so great at times that some of these jets of lava reached a height of eight hundred feet under the terrific pressure, casting large rocks semi-molten by the heat, rock fragments, ashes and flaming hot gasses into the air. The diameter of these fiery fountains measured from twenty to three hundred and fifty feet across.

After the first outburst tremendous torrents of molten lava reached the sea, forty miles away, in twenty-eight hours, and continued to pour into the ocean for nearly a month. The off-shore water at this point is very deep, reaching seven hundred feet one hundred feet out, and rapidly falling into greater depths. An examination of the sea from a native canoe indicated that the fiery lava had seeped into the fissures in the rocks on the ocean bed and had made a subterranean tunnel extending well out into the ocean.

This tunnel was bursting at various points with loud detonations and sending up clouds of steam. The sea and the shore were covered with the carcasses of dead fish. A native boatman ventured four miles out, where he saw water in great commotion and found fish that had been cooked in the steaming hot water. Although he had spent his life on the sea and was acquainted with the kinds of marine food that the ocean thereabout provided, none of these thoroughly cooked fish were familiar to him, so he took them to the fish inspector at Hilo, but he could not recognize them. They were then shipped, with others collected from the shore to Professor Jordan for identification.

After he examined and classified six distinct new species, Professor Jordan said: "I consider this discovery the most remarkable and important on record."

Some idea of the conditions under which these fish have lived throughout the ages may be had by consideration of the darkness, cold and pressure they have had to endure.

From evidence now at hand with respect to the light in the sea, it seems certain that sunlight does not extend below 200 fathoms, and even then becomes very dim.

It is always cold at the bottom of the sea, as the influence of warm surface currents does not extend below 100 fathoms.

The pressure at great depths is tremendous, crumbling all objects that are not able to withstand it.

The Astonishing Rectangular Deep Sea Creature Known as Loa Excelsa.